

ABSTRACT OF THE DISCLOSURE

In the present invention, plural test vectors are supplied to good and faulty samples as semiconductor devices in order to measure current values, and change rates of the current values corresponding to each test vector are calculated. The change rates of the current values in the good and faulty samples are then compared, and address pairs of test vectors to be used in a pass/fail decision for semiconductor devices are determined based on the comparison results. Test vectors to be used for performing an emission analysis are obtained based on the change rates of the current values obtained from the good and faulty samples. The obtained test vectors are supplied to the faulty sample in order to perform the emission analysis, in which emission patterns of the good and faulty samples are compared, by using an emission microscope, and a part of a defect in the faulty sample is detected.